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(54) Furniture kit

(57) A construction kit from which furniture for various purposes may be assembled to provide storage, display or work surface structures consists of modular units (1) of prescribed dimensions which can be supported either on a free standing frame 14 or by engagement with a support bracket (16) hung from a wall or like structure. Bridging walls (17, 22) are also provided which may be fitted at their longitudinal upper edges with lighting units (20, 25). The bridging walls may also be magnetic and act as holding elements for documents, drawings, etc when used with holding magnets.

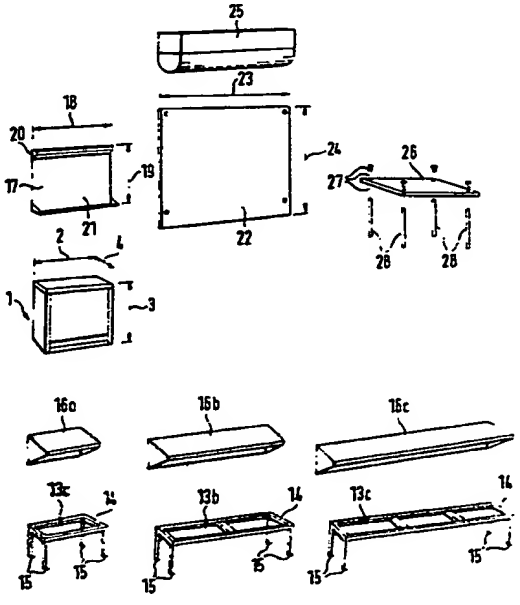

FIG.1

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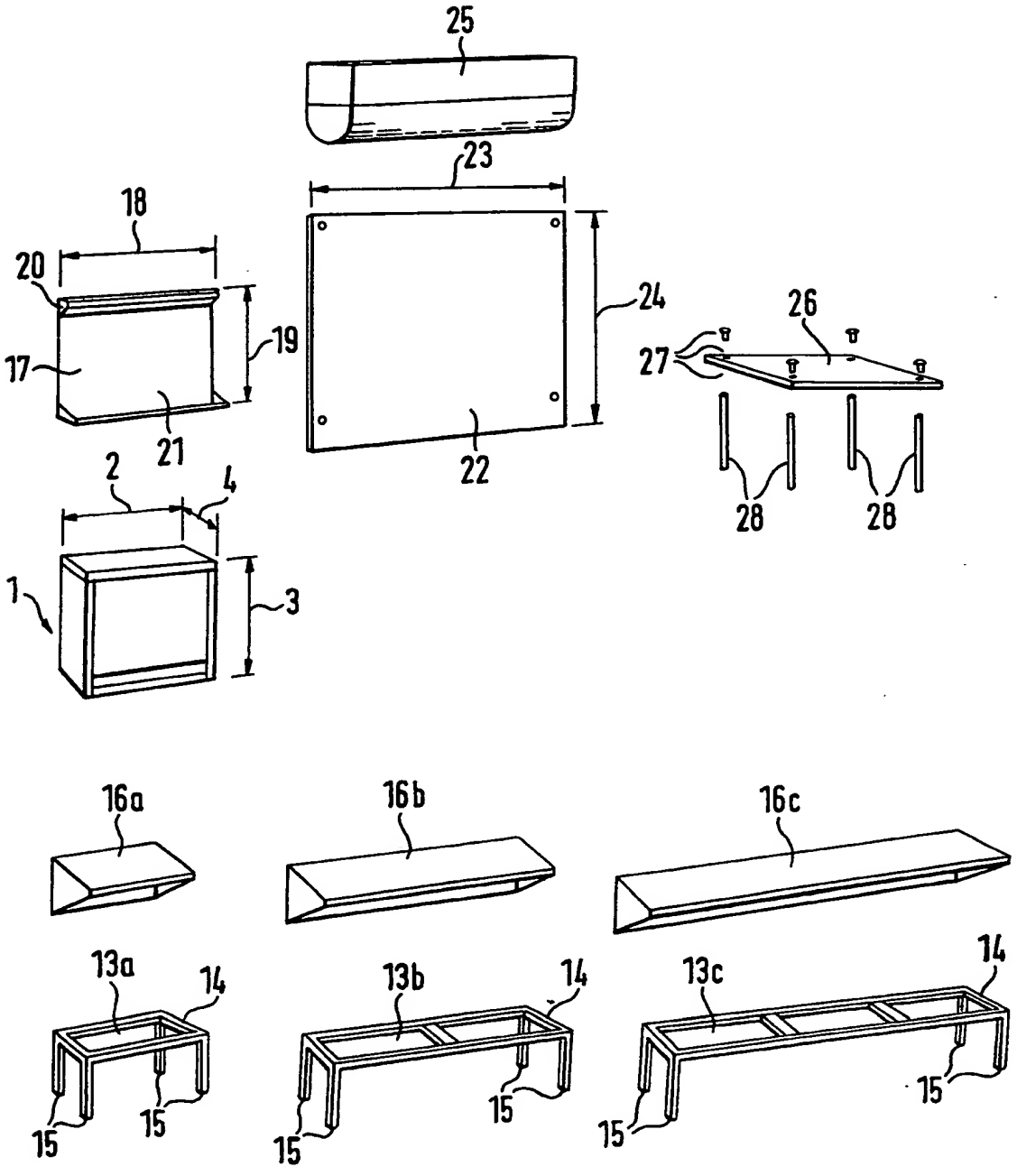
25
23
18
20
24
26
27
19
17
21
22
28
28
2
4
1
3
16a
16b
16c
13a
14
13b
14
13c
14
15
15
15
15
15
15

FIG. 1

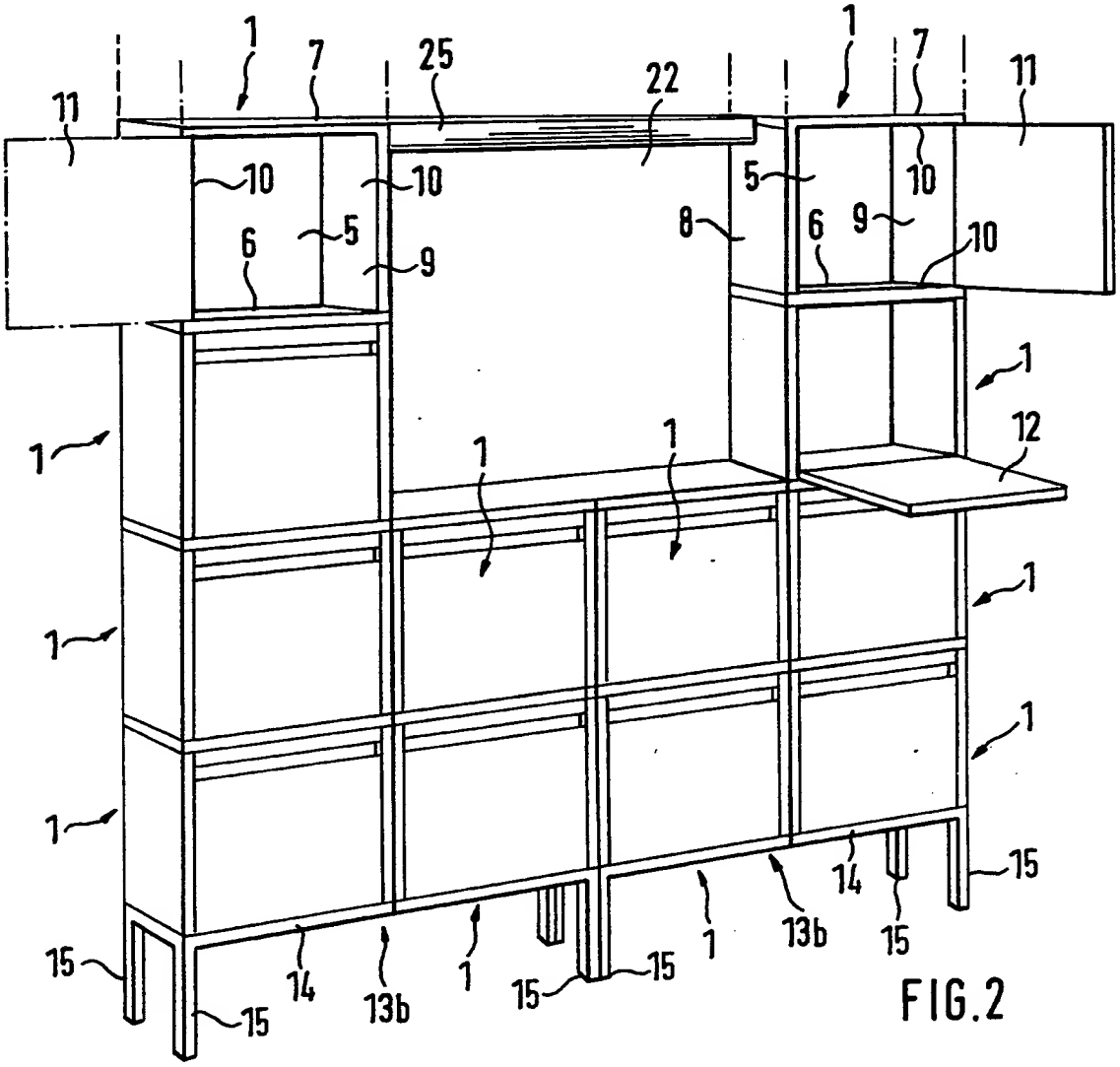

FIG.2

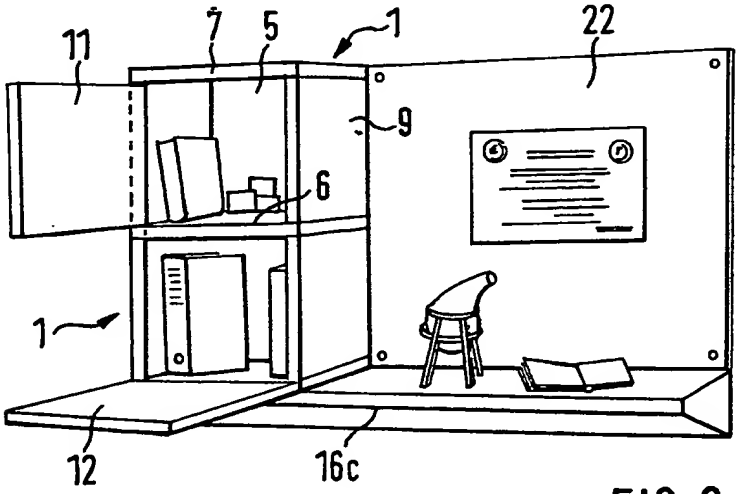

FIG.3

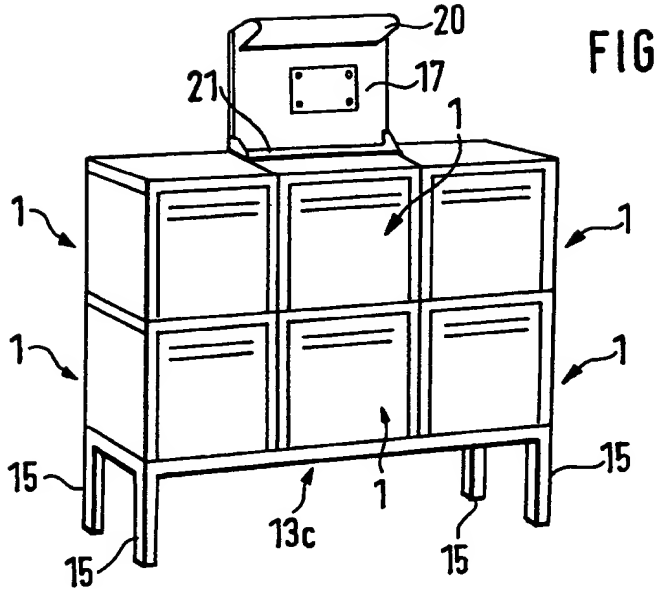
20
21
17
1
1
1
1
1
1
15
15
15
13c
1
15

FIG. 4

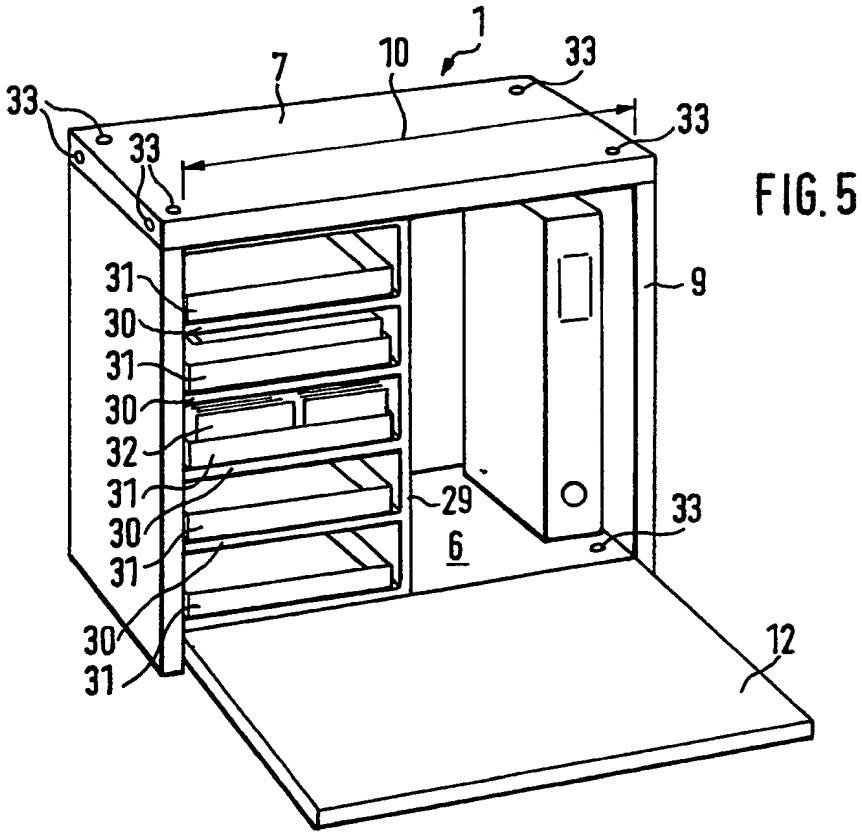
1
7
10
33
33
33
33
33
31
30
31
30
32
31
30
31
30
31
29
6
9
33
12

FIG. 5

CONSTRUCTION KIT FOR THE ERECTION OF FURNITURE

The improvement relates to a construction kit for the erection of furniture such as; storage units, display units and work surface units with various operating arrangements, for example, information desks or counters, for use in repair workshops, service stations, wholesale and retail businesses, and also spare-part stores and customer service centres. Such furniture comprises parallelepipedic housing modules of prescribed width, height and depth, with which a rear wall has connected thereto a base, a top and two side walls, which in turn, with one another, define an opening towards the front, the opening possibly being adapted to be closed by a laterally hinged swing door or a flap hinged at the bottom, and the housing modules possibly being able to be positioned side by side and/or above one another and connected to one another.

For the erection of furniture, it is known, for example, from German Gebrauchsmuster 87 14 524, to use suspended cupboards made of sheet steel, which are suitable for accommodating files, brochures and other articles.

These suspended cupboards comprising parallelepipedic housing modules of prescribed width, height and depth are of such a construction that the files, brochures or other articles can be arranged in them so that they can be easily gripped and so that the suspended cupboards can be used for many purposes and are also inexpensive in their construction.

However, it has been shown that the structural units formed only of suspended cupboards or cabinets have only a limited range of uses for the erection of variable devices for business use, because they are only able to be arranged in the region of freely accessible wall surfaces and, despite the

juxtaposed and superimposed arrangement, make necessary a single fixing on these walls.

The invention accordingly has for its object to provide a construction kit of the formation of variable furniture of the type as indicated, which kit has broadened range of uses and is capable, at low expense, of being conveniently adapted to different requirements.

According to the present invention there is provided a constructional kit for the erection of furniture, comprising parallelepipedic housing modules of prescribed width, height and depth, with which a rear wall has connected thereto a base, a top and two side walls, which in turn, with one another, define an opening towards the front, the opening possibly being adapted to be closed by a laterally hinged door or a flap hinged at the bottom, and the housing modules possibly being able to be positioned side by side and/or above one another and connected to one another, characterised in that the housing modules are able to be positioned, separately or in groups which can be connected to one another, on support frames standing on the ground and/or on support brackets which can be hung on the wall, the width and depth of the modules corresponding to the single or integral multiple of width dimension and depth dimension of the housing modules , that bridging walls are able to be combined with housing modules and/or support brackets arranged with spacing adjacent and/or above one another, of which the breadth and height correspond to the single or integral multiple of width dimension and height dimension of the housing modules , and that these bridging walls can be provided or fitted at their upper longitudinal edge with a lighting unit and are also designed to be magnetically receptive over their entire surface area.

Using a constructional kit according to the improvement, utility arrangements can be easily provided, which are not only able to be erected in the vicinity of walls, but also assembled freely in rooms, for example, in the manner of room dividers, and then also make possible the formation of equipment systems extending over their entire structural height and width, when parallelepipedic housing modules can be arranged without interruption side by side and/or one above the other.

It is also an advantage according to the improvement if - in accordance with claim 2 - the housing modules are able to be connected below one another and also possibly to the support frames and or brackets by screws which can be inserted into holes provided in their walls which are adjoining one another

and thereby the bridging walls and also possibly additional intermediate boards are able to be connected to the housing modules by screws which can be inserted in corresponding holes.

In addition, it may also prove to be advantageous if - according to claim 3 - flexible sheet-like members, for example, of rubber or synthetic plastics, are used as writing or support mats for those cover surfaces of the housing modules and/or support surfaces of the wall brackets which are arranged before the bottom edges of the bridging walls, which members, in their turn - according to claim 4 - are able to be fixed by latching elements, e.g. expandible rivets, in the holes of the cover on the housing modules or respectively on the wall brackets.

The field of application of the constructional kit can be further enlarged according to claim 5 by shelf inserts for the housing modules, in which each shelf can be used as a guide for a drawer. In this case, by such shelf inserts, each housing module is able to be divided to meet requirements and in this way used as a space-saving accommmodation of articles to be stored.

In this way, it is further possible to use insert boxes of prescribed but different size, which can be severally inserted side by side and/or following one another into a drawer so as to be removable, so that each drawer is in turn subdivided and utilised in space-saving manner.

Finally, however, the use of panels provided with supporting feet is also possible and these can - if required - be fitted into the housing modules.

Constructional examples of the arrangement according to the improvement are hereinafter explained by reference to the drawing, wherein:

Figure 1 is a perspective view showing the various structural elements belonging to the constructional kit for the erection of variable operating units,

Figure 2 is a perspective view of a first system construction of various structural elements of the construction kit according to Figure 1,

Figure 3 is another perspective view of a second system construction of structural elements of the construction kit according to Figure 1,

Figure 4 is also a perspective view of a third system construction of structural elements of the construction kit according to Figure 1, and

Figure 5 is a view to a larger scale of a housing module of the construction kit according to Figure 1.

The construction kit according to the improvement for the erection of variable management arrangements, for example, info desks, which are suitable for being used in repair workshops, service stations, wholesale and retail businesses, and also spare part stores and customer service centres, is shown in Figure 1 of the drawing.

The essential component of the construction kit is provided by parallelepipedic housing modules 1, which each have a specific width 2, height 3 and depth 4.

With each of these housing modules 1, a rear wall 5 has a base 6 connected to its bottom end and a top 7 at its upper end, and these latter in turn are connected by two side walls 8 and 9, as can be seen in Figures 2 and 3 of the drawing.

The forwardly facing opening 10 of each housing module 1 can either be closed by a hinged door 11 or even by a flap 12.

While the hinged door 11 may be connected at will to the left-hand side wall 8 or to the right-hand side wall 9 of a housing module 1, the flap 12 is advantageously hinged in the vicinity of the base 6 of a housing module 1.

Included among the structural parts according to Figure 1 are also support stands 13a, 13b, 13c, which each comprise a rectangular frame 14 and support legs 15 at its four corners. The width and the depth of the frame 14 of the support stands 13a, 13b, 13c is matched to the width 2 and the depth 4 of the housing modules 1. As regards the stand 13a, the width and

depth of the frame correspond to the single breadth dimension 2 and depth dimension 4 of a housing module 1. In contrast therewith, the width of the support stand 13b is designed to correspond to twice the width dimension 2 of a housing module 1. Finally, the support stand 13c has a structural width which amounts to three times the width dimension 2 of a housing module 1.

With the aid of the support stands 13a, 13b, 13c, housing modules 1 can be set up - in the form of a cupboard - on the floor, as is to be seen, by way of example, in Figure 2.

In this case, the cupboard structure according to Figure 2 comprises two support stands 13b and twelve rectangular housing modules 1, these latter being so constructed that the outer limit of the cupboard is formed by four housing modules 1 disposed one above the other, while the middle region of the cupboard consists of four rectangular housing modules 1, which are arranged in pairs, side by side and one above the other.

However, also included in the constructional kit according to Fig. 1 are supporting brackets 16a, 16b, 16c, which can be fixed on a wall. The width and depth of the support brackets 16a, here correspond to the width dimension 2 and the depth dimension 4 of a housing module 1, while the support bracket 16b has a width which corresponds to twice the width dimension 2 of a housing module 1. As regards the support bracket 16c, the width is matched to three times the width dimension 2 of a housing module 1.

After a support bracket 16a, 16b, 16c has been fixed on the wall, it is possible to position thereon rectangular housing modules 1, as can be seen, for example, from Figure 3 of the drawing. In this case, there is used, for example, at this position, a support bracket 16c which has a width corresponding to three times the width dimension 2 of a housing module 1. It is only on one side, for example, the left-hand side, that two housing modules 1 are arranged one above the other on this support bracket 16c. In this case, two thirds of the width of the support bracket 16c are therefore free from

housing modules 1, so that the support brackets 16c are able, at this position, to be used, for example, as a surface for supporting apparatus and/or as a writing surface. In this connection, it is expedient for at least that width section of the support bracket 16c not occupied with housing modules 1 to be covered with a flexible lamellar structure, for example, consisting of rubber or synthetic plastics, as a writing or supporting mat, which protects the actual surface of the support bracket 16c against being scratched or other damage.

Provided as a further component of the construction kit according to Figure 1 is a bridging wall 17, the width 18 of which corresponds to the width dimension of a rectangular housing module, while its height 19 is adapted to the height dimension 3 of a housing module 1.

At the upper end of the bridging wall 17, it is possible to arrange a lighting fixture 20 which advantageously extends over the width 18, while the lower end of said wall can be provided with a supporting or fixture plate 21.

As shown in Figure 4, this bridging wall 17 can be arranged and advantageously fixed in the vicinity of the rearward end of a housing module 1, and be used as an information board, for example, for the securing of messages, drawings or the like. It is therefore an advantage if the bridging wall 17 consists of a magnet-holding material, for example, steel plating, with which holding magnets as holding elements for the documents, drawings or the like are able to coact.

Since the bridging wall 17 corresponds as regards its width 18 and its height 19 to the width 2 and the height 3 of a housing module 1, it is possible, differing from Figure 4, for this wall also to be used in those cases where the cupboard structure as shown comprises not only six housing modules 1, but rather eight such modules 1, the two additional housing modules 1 then being disposed on the two sides of the bridging wall 17.

However, a component of the constructional kit according to Figure 1 is also yet another bridging wall 22, the width 23 of which corresponds to twice the width dimension 2 of a housing module 1, while it has a height 24, which has a dimension equal to twice the height dimension 3 of such a housing module 1.

Such a bridging wall 22 is capable of being used in conjunction with a cabinet structure according to Figure 2 and also in association with the support bracket 16c and the housing modules 1 according to Figure 3, where the said wall is, for example, also able to be used as an information panel. Consequently, the bridging wall 22 is also advantageously made of a magnetic material, so that it can be equipped with adhesion magnets.

The bridging wall 22 may be fitted along its upper edge with a lighting unit 25 made in strip form, such as that which is indicated in Figure 2.

Such a lighting unit 25 also forms part of the structural unit according to Figure 1.

An additional component of the constructional kit according to Figure 1 may also be provided by intermediate shelves 26, which are matched to the inside width and depth of the housing modules 1. Supporting feet 28 may also be provided on the underside of these intermediate shelves 26 by push-in connections 27, with the aid of which an intermediate shelf is able to be set up on the base 6 of a housing module. The length of the supporting feet 28 thereby determines the actual distance of the intermediate shelf 26 from the floor 6 of a housing module 1. With the aid of the supporting feet 26, it is, however, also possible for several intermediate shelves 26 to be positioned in spaced relation one above the other within a housing module.

Also to be seen in Figure 5 is a housing module 1, of which the front opening 10 can be closed by a flap 12. The flap 12 is here so provided that it can be supported in a stable manner in a horizontal open position on the base 6 of

the housing module 1 and is then capable of being used as a supporting or writing surface.

Shelf inserts 29 comprising several shelves 30 arranged one above the other may also be provided in the housing module 1. Each shelf 30 of such a shelf insert 29 is then capable of being used directly as a storage surface, for example, for stacks of paper. The shelves 30 may, however, also be utilised as supports for drawers 31, which drawers in their turn can be used for accommodating fitted boxes 32. These fitted boxes 32 may be of different sizes and be of such dimensions that they are severally able to be arranged beside or behind one another in a drawer 31. Holes 33 may be provided in the base 6, in the top 7 and also in the side walls 8 and 9 of each housing module 1, which holes form entry openings for screws or the like, with the aid of which housing modules arranged immediately adjacent and/or above one another are able to be connected so as to be safe against displacement.

The holes 33, which are formed in the top 7 and in the side walls 8 and 9 near the rear wall of each housing module 1 may naturally also be used as fixing points for the bridging walls 17 and 22.

The holes 33 in the top 7 of each housing module may naturally also be used in order, for example, to fix the flexible sheet-like members, for example, of rubber or synthetic plastics, which are to serve as writing or supporting mats, so that they are secure against displacement. Plug stoppers or the like may, for example, be pressed into these holes 33 through holes in the flexible sheet-like members.

In conclusion, it may also be mentioned that, with the shelving construction according to Figure 2, the tops 6 of the two housing modules 1 positioned beneath the bridging wall 22 can be used as a support or writing surface and, for this purpose, may be covered with a writing or supporting mat in the manner as has just been described.

CLAIMS

1. Constructional kit for the erection of furniture, comprising parallelepipedic housing modules of prescribed width, height and depth, with which a rear wall has connected thereto a base, a top and two side walls, which in turn, with one another, define an opening towards the front, the opening possibly being adapted to be closed by a laterally hinged door or a flap hinged at the bottom, and the housing modules possibly being able to be positioned side by side and/or above one another and connected to one another, characterised in that the housing modules (1) are able to be positioned, separately or in groups which can be connected to one another, on support frames (13a, 13b, 13c) standing on the ground and/or on support brackets (16a, 16b, 16c) which can be hung on the wall, the width and depth of the modules corresponding to the single or integral multiple of width dimension (2) and depth dimension (4) of the housing modules (1), that bridging walls (17 or 22) are able to be combined with housing modules (1) and/or support brackets (16a, 16b, 16c) arranged with spacing adjacent and/or above one another, of which the breadth (18 or 23) and height (19 or 24) correspond to the single or integral multiple of width dimension (2) and height dimension (3) of the housing modules (1), and that these bridging walls (17 and 22) can be provided or fitted at their upper longitudinal edge with a lighting unit (20 or 25) and are also designed to be magnetically receptive over their entire surface area.

2. Constructional kit according to claim 1, characterised in that the housing modules (1) are able to be connected below one another and also possibly to the support frames (13a, 3b, 13c) and/or support brackets (16a, 16b, 16c) by screws or the like which can be inserted into their walls which adjoin one another, and that also the bridging walls (17 or 22) are able to be connected to the housing modules (1) by means of screws which can be inserted into corresponding holes.

3. Constructional kit according to one of claims 1 and 2, characterised by flexible sheet-like members, for example, of rubber or synthetic plastics, as writing and/or support mats for those cover surfaces of the housing modules (1) and/or support surfaces of the wall brackets (16a, 16b, 16c) which are arranged before the bottom edges of the bridging walls (17 or 22).

4. Constructional kit according to claim 3, characterised in that the flexible sheet-like members are adapted to be fixed by latching elements, for example, support studs, in the holes (33) of the cover (7) to the housing modules (1) or respectively to the wall brackets (16a, 16b, 16c).

5. Constructional kit according to one of the claims 1 to 4, characterised by shelf inserts (29) for the housing modules (1), in which each shelf (30) can be used as a guide for a drawer (31).

6. Constructional kit according to claim 5, characterised by insertable boxes (32) of specified but different size, which are severally to be removably fitted side by side and/or behind one another into a drawer (31).

7. Constructional kit according to one of claims 1 to 6, characterised by shelves (26) which are provided with supporting feet (28) and which can be fitted into the housing modules (1).

8. Construction kit for the erection of furniture, comprising parallelepipedic modules of prescribed width, height and depth, each having a rear wall connected to a base, a top and two side walls, which define a housing open towards the front, the opening capable of being adapted to be closed by a laterally hinged door or a flap hinged at the bottom, and the housing modules capable of being positioned side by side and stacked one above another and connected to one another, characterised in that the modules (1) are adapted to be positioned, separately or in groups which can be connected to one another on a free standing support frame (13a, 13b 13c) and/or support brackets (16a, 16b, 16c) which can be hung on a wall, the width and depth of the modules corresponding to an integer multiple of the width dimension (2) and depth dimension (4) of the housing modules (1), that bridging walls (17 or 22) are able to be combined with housing modules (1) and/or support brackets (16a, 16b, 16c) arranged with spacing adjacent and/or above one another, of which the breadth (18 or 23) and height (19 or 24) correspond to the single or integer multiple of width dimension (2) and height dimension (3) of the housing modules (1), and that these bridging walls (17 and 22) can be provided or fitted at their upper longitudinal edge with a lighting unit (20or 25) and are magnetic.

9. A construction kit as herein described with reference to the accompanying drawings.

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